

## ABSTRACT

A new way of applying the compartmental approach to the simulation of multi-stage separation processes in the process industry leads to more robust simulation models and higher success rate. The new approach makes use of steady-state component balances, constant vapor-liquid equilibrium ratios, and initialization models. Guidelines are provided for creating a computer executable regular model of the multi-stage separation process. Guidelines are also provided for creating a computer executable model that solves the problem of initialization failure of the regular model for the process.